SONY

3-113-855-**11** (1)

LCD Monitor

Operating Instructions

HIGH-DEFINITION MULTIMEDIA INTERFACE

LMD-2030W

© 2007 Sony Corporation

Owner's Record

The model and serial numbers are located at the rear. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____
Serial No. _____

Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

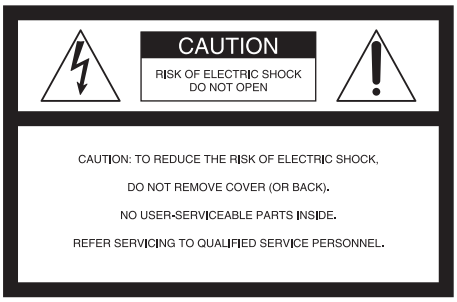
WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

WARNING

THIS APPARATUS MUST BE EARTHED.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

Make sure the surface is wide enough so that this apparatus's width and depth don't exceed the surface's edges.
If not, this apparatus may lean or fall over and cause an injury.

Attention-when the product is installed in Rack:

1. Prevention against overloading of branch circuit
When this product is installed in a rack and is supplied power from an outlet on the rack, please make sure that the rack does not overload the supply circuit.

2. Providing protective earth
When this product is installed in a rack and is supplied power from an outlet on the rack, please confirm that the outlet is provided with a suitable protective earth connection.

3. Internal air ambient temperature of the rack
When this product is installed in a rack, please make sure that the internal air ambient temperature of the rack is within the specified limit of this product.

4. Prevention against achieving hazardous condition due to uneven mechanical loading
When this product is installed in a rack, please make sure that the rack does not achieve hazardous condition due to uneven mechanical loading.

5. Install the equipment while taking the operating temperature of the equipment into consideration
For the operating temperature of the equipment, refer to the specifications of the Operation Manual.

6. When performing the installation, keep the following space away from walls in order to obtain proper exhaust and radiation of heat.

Lower, Upper: 4.4 cm (1.75 inches) or more

For the customers in the USA
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

WARNING
Using this unit at a voltage other than 120 V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

For the customers in the USA
Lamp in this product contains mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (www.eiae.org).

For the customers in Europe
This product with the CE marking complies with both the EMC Directive and the Low Voltage Directive issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European standards:
- EN60065 : Product Safety
- EN55103-1 : Electromagnetic Interference(Emission)
- EN55103-2 : Electromagnetic Susceptibility(Immunity)

This product is intended for use in the following Electromagnetic Environments:
E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio)

For the customers in Europe
The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.
The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

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Precaution

On Safety

- Operate the unit only with a power source as specified in the "Specifications" section.
- A nameplate indicating operating voltage, etc., is located on the rear panel.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not drop or place heavy objects on the power cord. If the power cord is damaged, turn off the power immediately. It is dangerous to use the unit with a damaged power cord.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- Disconnect the power cord from the AC outlet by grasping the plug, not by pulling the cord.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.

On Installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

Handling the LCD Screen

- Do not leave the LCD screen facing the sun as it can damage the LCD screen. Take care when you place the unit by a window.
- Do not push or scratch the LCD monitor's screen. Do not place a heavy object on the LCD monitor's screen. This may cause the screen to lose uniformity.
- If the unit is used in a cold place, horizontal lines or a residual image may appear on the screen. This is not a malfunction. When the monitor becomes warm, the screen returns to normal.
- If a still picture is displayed for a long time, a residual image may appear. The residual image will eventually disappear.
- The screen and the cabinet become warm during operation. This is not a malfunction.

Note on faulty pixels on the LCD panel

The LCD panel fitted to this unit is manufactured with high precision technology, giving a functioning pixel ratio of at least 99.99 %. Thus a very small proportion of pixels may be stuck, either always off (black), always on (red, green, or blue), or flashing. In addition, over a long period of use, because of the physical characteristics of the liquid crystal display, such "stuck" pixels may appear spontaneously. These problems are not a malfunction.

About the Fluorescent Tube

A specially designed fluorescent tube is installed as the lighting apparatus for this unit. If the LCD screen becomes dark, unstable or does not turn on, consult your Sony dealer.

On Cleaning

Before cleaning

Be sure to disconnect the AC power cord from the AC outlet.

On cleaning the monitor screen

The monitor screen surface is especially treated to reduce reflection of light. As incorrect maintenance may impair the performance of the monitor, take care with respect to the following:

- Wipe the screen gently with a soft cloth such as a cleaning cloth or glass cleaning cloth.
- Stubborn stains may be removed with a soft cloth such as a cleaning cloth or glass cleaning cloth lightly dampened with water.
- Never use solvent such as alcohol, benzene or thinner, or acid, alkaline or abrasive detergent, or chemical cleaning cloth, as they will damage the screen surface.

On cleaning the cabinet

- Clean the cabinet gently with a soft dry cloth. Stubborn stains may be removed with a cloth lightly dampened with mild detergent solution, followed by wiping with a soft dry cloth.
- Use of alcohol, benzene, thinner or insecticide may damage the finish of the cabinet or remove the indications on the cabinet. Do not use these chemicals.
- If you rub on the cabinet with a stained cloth, the cabinet may be scratched.
- If the cabinet is in contact with a rubber or vinyl resin product for a long period of time, the finish of the cabinet may deteriorate or the coating may come off.

On Repacking

Do not throw away the carton and packing materials. They make an ideal container which to transport the unit.

On Mounting on a Rack

Leave 1U space empty above and below the monitor to ensure adequate air circulation or install a fan to maintain the monitor's performance.

If you have any questions about this unit, contact your authorized Sony dealer.

On Replacing the Parts

Note that if service personnel changes some parts during repair, these parts may be retained.

Features

The LMD-2030W (20-inch) is a multiple format LCD monitor for broadcast/professional use featuring a precise image and high performance. Supporting digital/analog main broadcast signals, and HDMI[1)] input, it can be used under various lighting conditions.

1) HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

High brightness LCD panel

Because of precise image, wide viewing angle technology and high speed response, real color image can be reproduced.

Multi-format

The monitor supports the video, Y/C, RGB, component and HDMI input signals.
SDI signals can be available when input adaptor BKM-320D (optional) is used.
Both NTSC and PAL color systems are supported, and the appropriate color system is selected automatically.

For more information, see "Video signal formats" (page 22).

External sync input

When the EXT SYNC button is in the on position, the unit can be operated on the sync signal supplied from an external sync generator.

Automatic termination (connector with ⎓ mark only)

The input connector is terminated internally at 75 ohms when nothing has been connected to the output connector. If a cable is connected to the output connector, the internal terminal is automatically released and the signals input to the input connector are output to the output connector (loop-through).

External remote control function

You can directly select the input signal, aspect, etc., by operating the equipment connected to the PARALLEL REMOTE connector.

Monitor stand with tilt function

A monitor stand with tilt function is equipped for desk top use. It shall be removed when mounted on the rack.

Rack mount

The monitor supports the VESA (100 × 100 mm) standard.
It can be mounted on an EIA standard 19-inch rack (using an optional mounting bracket).

For more information, see "Installing to the Rack" (page 11).

3-color tally lamp

The tally lamp lights in red, green or amber to monitor each input picture and check the on-air mode.

Blue only mode

In the blue only mode, a monochrome display is obtained with all the three R/G/B picture elements driven with a blue signal. This mode is convenient for chroma and phase adjustments and monitoring of VCR noise.

Marker function

CENTER MARKER, 16:9 MARKER for the 4:3 aspect ratio or 4:3 MARKER for the 16:9 aspect ratio can be displayed.

Scan setting

You can set the display size to under scan, over scan or full screen mode.

Select color temperature and gamma mode

You can select the color temperature from among two (HIGH and LOW) settings.
You can select the gamma mode from among five settings.

Aspect setting

You can set the monitor to 4:3 or 16:9 display mode according to the input video signal.

On-screen menus

You can set the appropriate settings according to the connected system by using the on-screen menus.

Select language display

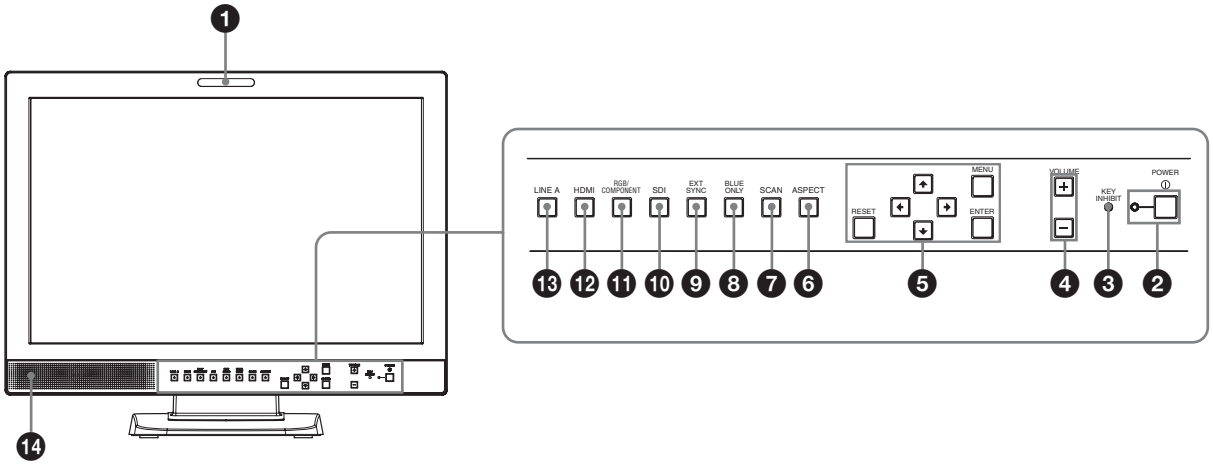
You can select from seven display languages English, French, German, Italian, Spanish, Japanese and Chinese.

Key inhibit function

You can inhibit a key, function to prevent misoperation.

Location and Function of Parts and Controls

Front Panel



❶ Tally lamp

You can check the status of the monitor by the color of the tally lamp.
The tally lamp lights in red, green or amber depending on the setting of the REMOTE PARALLEL menu.

❷ POWER switch and indicator

Press to turn on the power. The indicator turns on. Press again to turn off the power.

❸ KEY INHIBIT indicator

Lights when the key inhibit function works.

For details on the key inhibit, see "KEY INHIBIT menu" (page 19).

❹ VOLUME buttons

Press the + button to increase the volume or the – button to decrease it.

❺ Menu operation buttons

Displays or sets the on-screen menu.

↑/↓/←/→ (arrow) buttons

Select the menu or make various adjustments.

MENU button

Press to display the on-screen menu.
Press again to clear the menu.

RESET button

Resets the value of an item back to the previous value.
This button functions when the menu item is adjusted (displayed) on the screen.

ENTER button

Press to confirm a selected item on the menu.

❻ ASPECT select button

Sets the aspect ratio of the picture, 4:3 or 16:9.

❼ SCAN select button

You can change the scan size of the picture.
Press to change the scan size among over (5 % over scan), under (–3 % under scan) and full screen set on the SCAN menu (page 18).

❽ BLUE ONLY button

Press to eliminate the red and green signals. Only blue signal is displayed as a monochrome picture on the screen. This mode is convenient for chroma and phase adjustments and monitoring of VCR noise.

❾ EXT SYNC (external sync) button

Press to operate the unit on an external sync signal through the EXT SYNC IN connector.
The EXT SYNC button works when the component/RGB signals are input.

❿ SDI button

Press to monitor the signal through the OPTION IN connector.

⓫ RGB/COMPONENT button

Press to monitor the signal through the RGB/COMPONENT input connector.

⓬ HDMI button

Press to monitor the signal through the HDMI IN connector.

⓭ LINE A button

Press to monitor the signal through the LINE A input connector.

⓮ Speaker

The audio signal selected by the input select button (⓾ SDI button, ⓫ RGB/COMPONENT button, ⓬ HDMI button or ⓭ LINE A button) on the front panel is output.

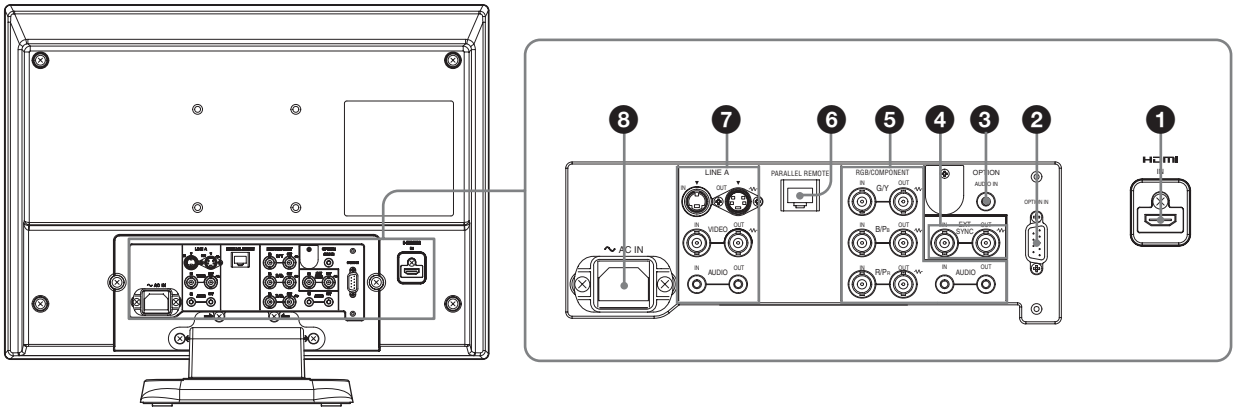
Input Signals and Adjustable/Setting Items

Item	Input signal									
	Video, Y/C	B & W	Component		RGB		SDI *4	HDMI		
			SD	HD	SD	HD	D1	SD	HD	DVI*6
CONTRAST	○	○	○	○	○	○	○	○	○	○
BRIGHT	○	○	○	○	○	○	○	○	○	○
CHROMA	○	×	○	○	×	×	○	○	○	×
PHASE	○ (NTSC)	×	×	×	×	×	×	×	×	×
APERTURE	○	○	○	○	×	×	○	○	○	×
COLOR TEMP	○	○	○	○	○	○	○	○	○	○
COMP LEVEL *1	×	×	○ (480/60I)	×	×	×	×	×	×	×
NTSC SETUP	○ (NTSC)	○ (480/60I)	×	×	×	×	×	×	×	×
GAMMA	○	○	○	○	○	○	○	○	○	○
SCAN	○	○	○	○	○	○	○	○	○	×
ASPECT	○	○	○	○*2	○	○*2	○	○	○*2	×
MARKER	○	○	○	○	○	○	○	○	○	×
BLUE ONLY	○	×	○	○	○	○	○	○	○	×
PIC DELAY MIN *3	○	○	○	○*5	○	○*5	○	○	○*5	×
EXT SYNC	×	×	○	○	○	○	×	×	×	×

○ : Adjustable/can be set
× : Not adjustable/cannot be set

*1 When a component signal (480/60I) is input, this can be switchable.
*2 When a 480/60P or 576/50P signal is input, this can be switchable.
*3 When an interlace signal is input, this can be switchable.
*4 When BKM-320D is used, SDI signals can be input.
*5 When a 1080I signal is input, this cannot be switched. (PIC DELAY MIN is set to “ON” only.)
*6 When a PC signal is input to the HDMI IN connector using a DVI conversion cable, this can be adjusted.

Rear Panel



❶ HDMI IN connector

HDMI (High-Definition Multimedia Interface) is an interface that supports both video and audio on a single digital connection, allowing you to enjoy high quality digital picture and sound. The HDMI specification supports HDCP (High-bandwidth Digital Content Protection), a copy protection technology that incorporates coding technology for digital video signals.

Note

Use HDMI compliant cable (optional) with HDMI logo.

❷ OPTION IN connector (D-sub 9-pin, female)

Inputs SDI signals when optional Sony input adaptor BKM-320D is connected.
Press the SDI button to select the signal.

Note

Do not connect the equipment other than BKM-320D. It causes damage to the unit or the equipment.

❸ OPTION AUDIO IN connector (phono jack)

Inputs an audio signal if the BKM-320D is connected to the OPTION IN connector.
Press the SDI button to monitor the audio signal.

❹ EXT SYNC IN/OUT (external sync) connectors (BNC)

Press the EXT SYNC button to use the sync signal through this connector.

IN connector

When this unit operates on an external sync signal, connect the reference signal from a sync generator to this connector.

Note

When inputting a video signal with the jitters, etc. the picture may be disturbed. We recommend using the TBC (time base corrector).

OUT connector

Loop-through output of the IN connector. Connect to the external sync input of video equipment to be synchronized with this unit.
When the cable is connected to this connector, the 75-ohms termination of the input is automatically released, and the signal input to the IN connector is output from this connector.

❺ RGB/COMPONENT connectors

Analog RGB signal or component (Y/PB/PR) signal input connectors and their loop-through output connectors.
Press the RGB/COMPONENT button to monitor the signal input through these connectors.

G/Y, B/PB, R/PR IN/OUT (BNC)

These are the input/output connectors for an analog RGB and a component (Y/PB/PR) signal. Unless an external sync signal is input, the monitor is synchronized with the sync signal contained in the G/Y signal.

AUDIO IN/OUT (phono jack)

When using an analog RGB or a component signal as a video signal, use these jacks for the input/output of an audio signal. Connect them to the audio input/output jacks on equipment such as a VCR.

❻ PARALLEL REMOTE connector (modular connector, 8-pin)

Forms a parallel switch and controls the monitor externally.

For details on the pin assignment and factory setting function assigned to each pin, see page 21.

CAUTON

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to this port. Follow the instructions for this port.

❼ LINE A connectors

Line input connectors for Y/C separate, composite video and audio signals and their loop-through output connectors.
Press the LINE A button to monitor the signal input through these connectors.
If you input signals to both Y/C IN and VIDEO IN, the signal input to the Y/C IN is selected.

Y/C IN/OUT (4-pin mini-DIN)

These are the input/output connectors for a Y/C separate signal. Connect them to the Y/C separate input/output connectors on equipment such as a VCR, video camera, or another monitor.

VIDEO IN/OUT (BNC)

These are the input/output connectors for a composite video signal. Connect them to the composite video input/output connectors on equipment such as a VCR, video camera, or another monitor.

AUDIO IN/OUT (phono jack)

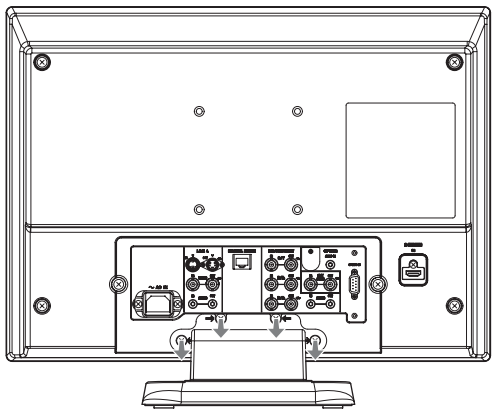
These are the input/output jacks for an audio signal. Connect them to the audio input/output jacks on equipment such as a VCR.

❽ AC IN socket

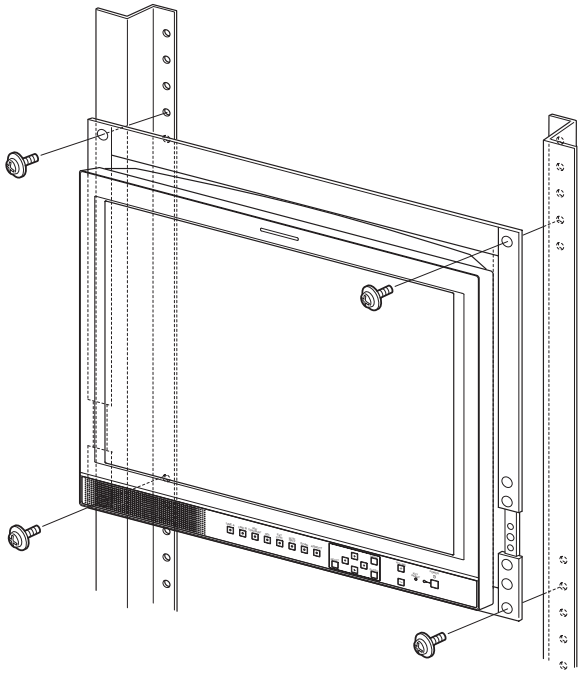
Connect the supplied AC power cord.

Installing to the Rack

1 Remove the screws (4) to remove the stand.

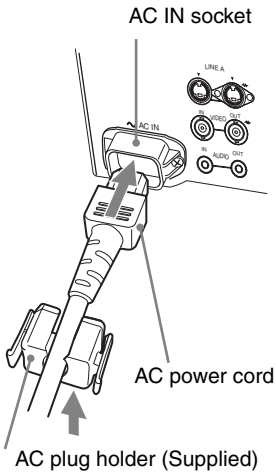


2 Attach the mounting bracket, then attach the unit to the rack.

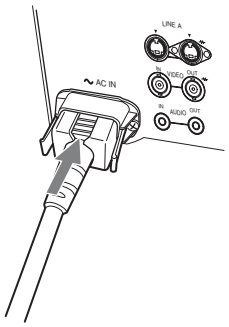


Connecting the AC Power Cord

1 Plug the AC power cord into the AC IN socket on the rear panel. Then, attach the AC plug holder (supplied) to the AC power cord.



2 Slide the AC plug holder over the cord until it locks.

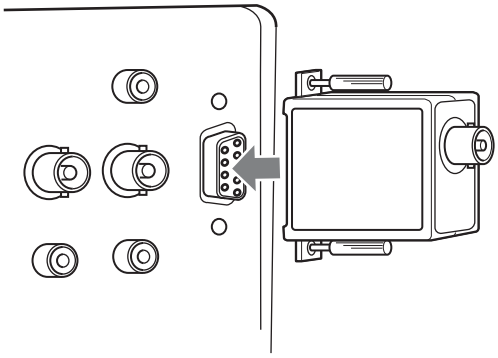


To disconnect the AC power cord

Pull out the AC plug holder while pressing the lock levers.

Attaching the Input Adaptor

Before attaching the input adaptor, disconnect the power cord.



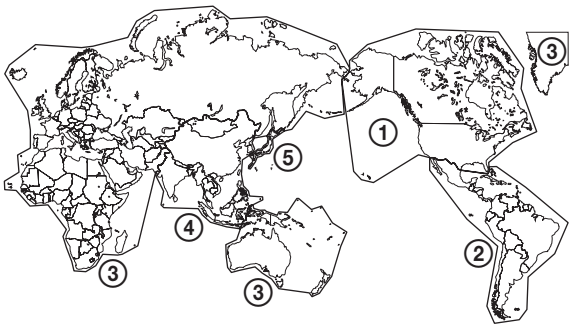
Note

Do not connect the equipment other than BKM-320D. It causes damage to the unit or the equipment.

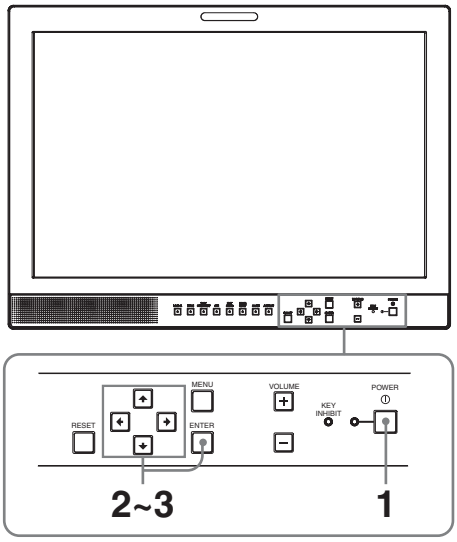
Selecting the Default Settings

When you turn on the unit for the first time after purchasing it, select the area where you intend to use this unit from among the options.

The default setting values for each area

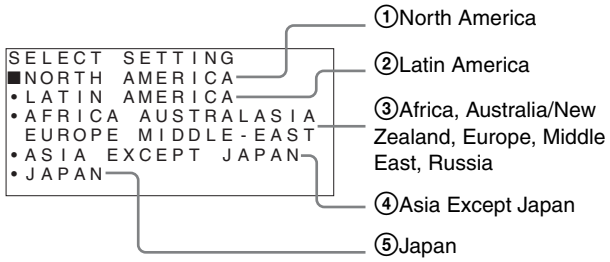


		COLOR TEMP	COMP LEVEL	NTSC SETUP
①NORTH AMERICA		LOW	BETA7.5	7.5
②LATIN AMERICA PAL&PAL-N AREA	ARGENTINA	LOW	SMPTE	0
	PARAGUAY	LOW	SMPTE	0
	URUGUAY	LOW	SMPTE	0
NTSC&PAL-M AREA	OTHER AREA	LOW	BETA7.5	7.5
③AFRICA AUSTRALASIA EUROPE MIDDLE-EAST		LOW	SMPTE	0
④ASIA EXCEPT JAPAN	NTSC AREA	LOW	BETA7.5	7.5
	PAL AREA	LOW	SMPTE	0
⑤JAPAN		HIGH	SMPTE	0



1 Press the POWER switch.

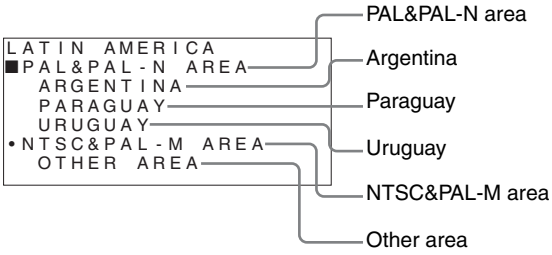
The power is turned on and the SELECT SETTING screen appears.



2 Press the ↑ or ↓ button to select the area where you intend to use the unit and press the → or ENTER button.

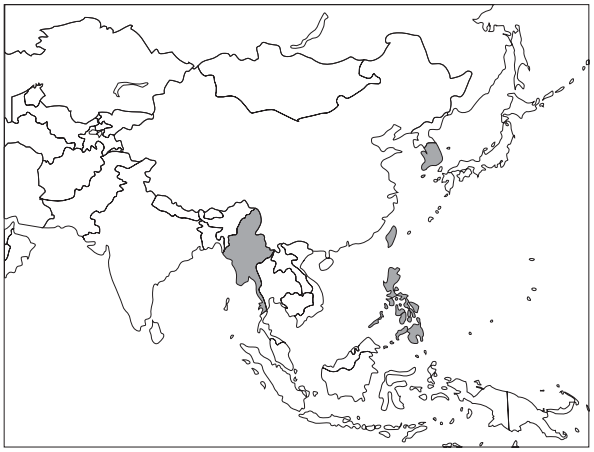
If you select either LATIN AMERICA or ASIA EXCEPT JAPAN, one of the following screens appears.

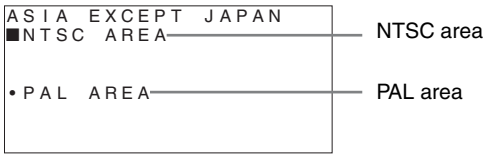
② If LATIN AMERICA is selected:



④ If ASIA EXCEPT JAPAN is selected:

Customers who will use this unit in the shaded areas shown in the map below should select NTSC AREA.
Other customers should select PAL AREA.





3 Press the ↑ or ↓ button to narrow the area further and then press the → or ENTER button.

The SELECT SETTING screen disappears and the menu item settings suitable for the selected area are applied.

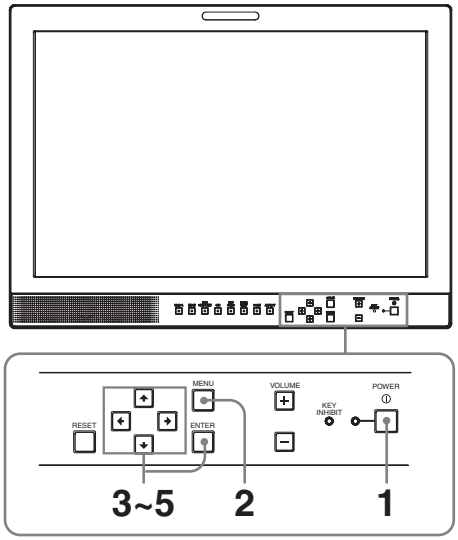
Note

When you have selected the wrong area, set the following items using the menu.
COLOR TEMP (on page 17)
COMP LEVEL (on page 18)
NTSC SETUP (on page 18)

See "The default setting values for each area" (page 13) on the setting value.

Selecting the Menu Language

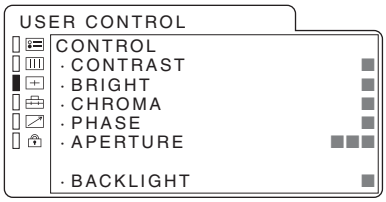
You can select one of seven languages (English, French, German, Spanish, Italian, Japanese, Chinese) for displaying the menu and other on-screen displays.
The current settings are displayed in place of the ■ marks on the illustrations of the menu screen.



1 Press the POWER switch to turn on the unit.

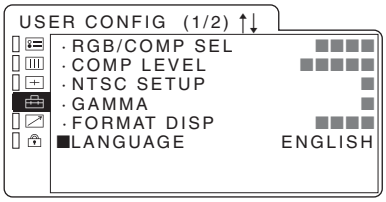
2 Press the MENU button.

The menu appears.
The menu presently selected is shown as a yellow button.



3 Press the ↑ or ↓ button to select the USER CONFIG 1/2 (User Configuration 1/2) menu, then press the → or ENTER button.

The setting items (icons) in the selected menu are displayed in yellow.

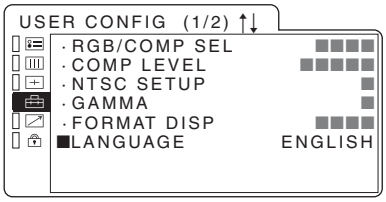


4 Press the ↑ or ↓ button to select the “LANGUAGE”, then press the → or ENTER button.

The selected item is displayed in yellow.

5 Press the ↑ or ↓ button to select a language, then press the ENTER button.

The menu changes to the selected language.



To clear the menu

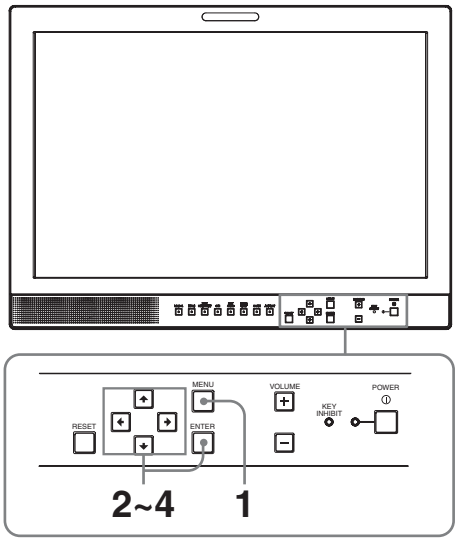
Press the MENU button.
The menu disappears automatically if a button is not pressed for one minute.

Using the Menu

The unit is equipped with an on-screen menu for making various adjustments and settings such as picture control, input setting, setting change, etc. You can also change the menu language displayed in the on-screen menu.

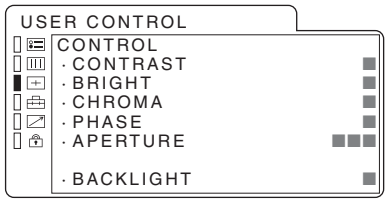
To change the language display, see “Selecting the Menu Language” (page 14).

The current settings are displayed in place of the ■ marks on the illustrations of the menu screen.



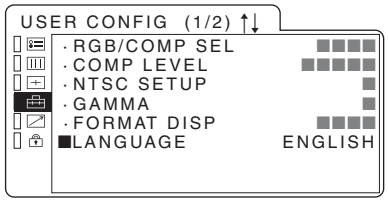
1 Press the MENU button.

The menu appears.
The menu presently selected is shown as a yellow button.



2 Press the ↑ or ↓ button to select a menu, then press the → or ENTER button.

The menu icon presently selected is shown in yellow and setting items are displayed.



3 Select an item.

Press the ↑ or ↓ button to select the item, then press the → or ENTER button.
The item to be changed is displayed in yellow.

Note

If the menu consists of multiple pages, press ↑ or ↓ to go to the desired menu page.

4 Make the setting or adjustment on an item.

When changing the adjustment level:
To increase the number, press the ↑ button.
To decrease the number, press the ↓ button.
Press the ENTER button to confirm the number, then restore the original screen.

When changing the setting:
Press the ↑ or ↓ button to change the setting. Press the ENTER button to confirm the setting.

Notes

- An item displayed in blue cannot be accessed. You can access the item if it is displayed in white.
- If the key inhibit has been turned on, all items are displayed in blue. To change any of the items, turn the key inhibit to OFF first.

For details on the key inhibit, see "KEY INHIBIT menu" (page 19).

To clear the menu

Press the MENU button.
The menu disappears automatically if a button is not pressed for one minute.

About the memory of the settings

The settings are automatically stored in the monitor memory.

To reset items that have been adjusted

Pressing the RESET button while you are adjusting any of the menu items resets the menu item to the previous setting.

Adjustment Using the Menus

Items

The screen menu of this monitor consists of the following items.

STATUS (the items indicate the current settings.)

FORMAT
COLOR TEMP
GAMMA
COMP LEVEL
NTSC SETUP
RGB/COMP SEL
SCAN MODE
DISPLAY
OPTION

COLOR TEMP/BAL

COLOR TEMP
MANUAL ADJ

USER CONTROL

CONTROL

USER CONFIG

RGB/COMP SEL
COMP LEVEL
NTSC SETUP
GAMMA
FORMAT DISP
LANGUAGE
MARKER
CENTER MARKER
MARKER LEVEL
SCAN
PIC DELAY MIN

REMOTE PARALLEL

1PIN
2PIN
3PIN
4PIN
6PIN
7PIN
8PIN

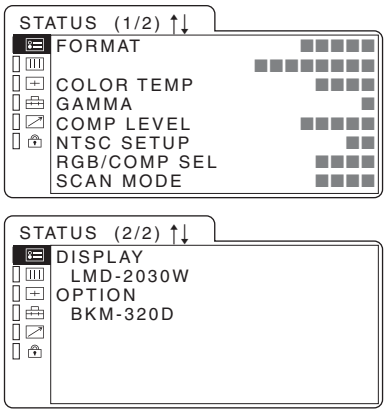
KEY INHIBIT

KEY INHIBIT

Adjusting and Changing the Settings

STATUS menu

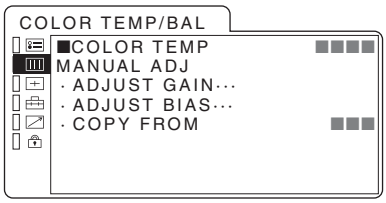
The STATUS menu is used to display the current status of the unit. The following items are displayed:



- Signal format
- Color temperature
- Gamma
- Component level
- NTSC setup
- RGB/Component select
- Scan mode
- Display
- Option

COLOR TEMP/BAL menu

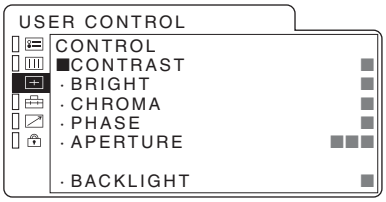
The COLOR TEMP/BAL menu is used for adjusting the picture white balance.
You need to use the measurement instrument to adjust the white balance.
Recommended: Konica Minolta color analyzer CA-210



Submenu	Setting
COLOR TEMP	Select the color temperature from among "HIGH", "LOW" and "USER" setting.
MANUAL ADJ	If you set the COLOR TEMP to "USER" setting, the item displayed is changed from blue to white, which means you can adjust the color temperature. • **ADJUST GAIN…**: Adjusts the color balance (GAIN). • **ADJUST BIAS…**: Adjusts the color balance (BIAS). • **COPY FROM**: If you select "HIGH" or "LOW", the white balance data for the selected color temperature will be copied in the "USER" setting.

USER CONTROL menu

The USER CONTROL menu is used for adjusting the picture. Items that cannot be adjusted depending on the input signal are displayed in blue.

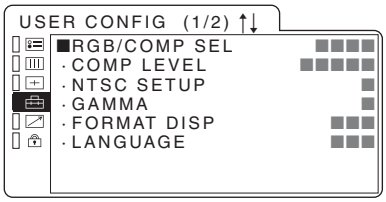


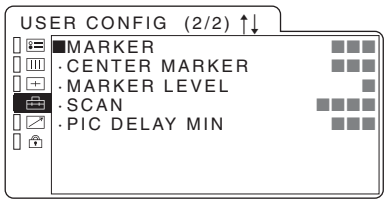
Submenu	Setting
CONTROL	You can adjust the picture. • **CONTRAST**: Adjusts the picture contrast. • **BRIGHT**: Adjusts the picture brightness. • **CHROMA**: Adjusts color intensity. The higher the setting, the greater the intensity. The lower the setting, the lower the intensity. • **PHASE**: Adjusts color tones. The higher the setting, the more greenish the picture. The lower the setting, the more purplish the picture. • **APERTURE**: Adjusts the picture sharpness. The higher the setting, the sharper the picture. • **BACKLIGHT**: Adjusts the backlight. The brightness of the backlight changes when the setting changes.

For details of input signals and adjustable/setting items, see page 9.

USER CONFIG menu

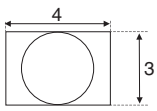
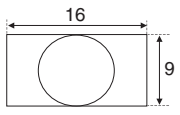
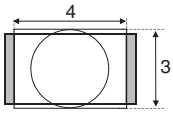
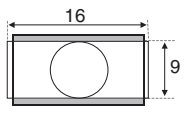
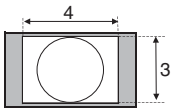
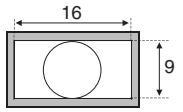
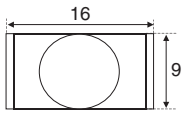
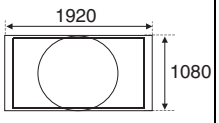
You can select a language, etc.
Items that cannot be adjusted depending on the input signal are displayed in blue.





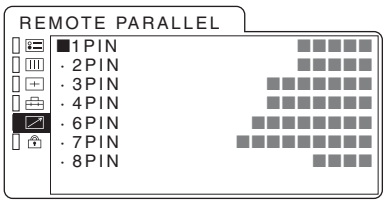
Submenu	Setting
RGB/COMP SEL	When a signal input via the RGB/COMPONENT connector is being monitored, based on the signal being input, select "RGB" or "COMP" (component).
COMP LEVEL	Select the component level from among three modes. • **SMPTE**: for 100/0/100/0 signal • **BETA0**: for 100/0/75/0 signal • **BETA7.5**: for 100/7.5/75/7.5 signal
NTSC SETUP	Select the NTSC setup level from two modes. The 7.5 setup level is used mainly in North America. The 0 setup level is used mainly in Japan.
GAMMA	Select the appropriate gamma mode. You can select from among five settings. When "3" is selected, the setting is roughly same as the gamma mode of the CRT (2.2).
FORMAT DISP	Select the display mode of the signal format. • **ON**: The format is always displayed. • **OFF**: The display is hidden. • **AUTO**: The format is displayed for about 10 seconds when the input of the signal starts.
LANGUAGE	You can select the menu or message language from among seven languages. • **ENGLISH**: English • **FRANÇAIS**: French • **DEUTSCH**: German • **ESPAÑOL**: Spanish • **ITALIANO**: Italian • **日本語**: Japanese • **中文**: Chinese
MARKER	When the frame of the film is displayed on the screen, select the aspect ratio according to the film. **When 16:9 aspect ratio is selected with the ASPECT select button** You can select either 4:3 or OFF. **When 4:3 aspect ratio is selected with the ASPECT select button** You can select either 16:9 or OFF.
CENTER MARKER	Select "ON" to display the center mark of the picture and "OFF" not to display.
MARKER LEVEL	Sets the luminance to display the "MARKER" and "CENTER MARKER". When the setting is low, the marker is displayed dark.

Submenu	Setting
SCAN	Sets the scan size of the picture. Select from "OFF" and "FULL" mode. • **OFF**: Changes between over scan and under scan. • **FULL**: Changes to over scan, under scan or full screen.
PIC DELAY MIN	Select to set the delay by the picture processing to the minimum level when the signal is input. When 1080I signal is input, "OFF" cannot be selected. • **OFF**: Mode for giving precedence to the picture quality (recommended mode). It takes longer than "ON" for processing the picture. • **ON**: The processing time is short. As the line flicker is displayed in this mode, it is available for checking the line flicker of the telop work and so on.

		Input	
			
Output	OVER SCAN (5 % OVER SCAN)		
	UNDER SCAN (–3 % UNDER SCAN)		
	FULL	–	
	FULL (1080)	–	

REMOTE PARALLEL menu

Select the PARALLEL REMOTE connector pins for which you want to change the function.
You can assign various functions to 1 to 4 pins and 6 to 8 pins. The following lists the functions you can assign to the pins.



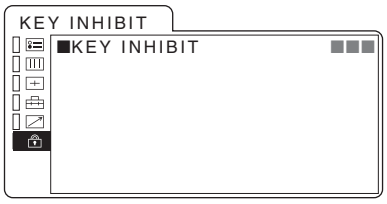
REMOTE PARALLEL

- – – – (“– – –”: No function is assigned.)
- LINE A
- HDMI
- RGB/COMP
- 16:9
- 4:3
- UNDER
- OVER
- TALLY R
- TALLY G
- EXT SYNC
- BLUE ONLY
- 16:9 MARKER
- 4:3 MARKER
- CENTER MARKER
- FULL
- SDI

If you use the PARALLEL REMOTE function, you need to connect cables.

For more details, see page 21.

KEY INHIBIT menu



You can lock the setting so that they cannot be changed by an unauthorized user.
Select OFF or ON.
If you set “ON”, all items are displayed in blue, indicating the items are locked.

Troubleshooting

This section may help you isolate the cause of a problem and as a result, eliminate the need to contact technical support.

- **The display is colored in green or purple** → Select the correct input from the RGB/COMP SEL setting in the USER CONFIG menu (page 17).
- **The unit cannot be operated** → The key protection function works. Set the KEY INHIBIT setting to OFF in the KEY INHIBIT menu.

Specifications

Picture performance

LCD panel	a-Si TFT Active Matrix
Picture size	20.1 type 433 × 271 × 511 mm (W/H/Diagonal) (17 1/8 × 10 3/4 × 20 1/8 inches)
Resolution	1,680 × 1,050 dots (WSXGA+)
Viewing angle	89° / 89° / 89° / 89° (typical)
Scan	Under –3 % Over 5 %
Aspect	16 : 10
Display color	16,700,000

Input/output connectors

Input

LINE A input connectors

Y/C input	4-pin mini-DIN (1)
VIDEO input	BNC type (1), 1 Vp-p ±3 dB, negative synchronization
AUDIO input	Phono jack (1), –5 dBu 47 kilohms or higher

RGB/COMPONENT input connectors BNC type (3)

RGB input	0.7 Vp-p ±3 dB, (Sync On Green, 0.3 Vp-p negative sync.)
Component input	0.7 Vp-p ±3 dB, (75 % chrominance standard color bar signal)
AUDIO input	Phono jack (1), –5 dBu 47 kilohms or higher

OPTION IN connector
D-sub 9-pin (1), female

OPTION AUDIO IN connector
Phono jack (1), –5 dBu 47 kilohms or higher

External synchronized input connector
BNC type (1), 0.3 to 4 Vp-p negative polarity binary

HDMI IN connector
HDMI (1)

PARALLEL REMOTE input connector

Parallel remote	Modular connector 8-pin (1)

Output

LINE A output connectors

Y/C output	4-pin mini-DIN (1), Loop-through, with 75 ohms automatic terminal function
VIDEO output	BNC type (1), Loop-through, with 75 ohms automatic terminal function
AUDIO output	Phono jack (1), Loop-through

RGB/COMPONENT output connectors

RGB/Component output	BNC type (3), Loop-through, with 75 ohms automatic terminal function
AUDIO output	Phono jack (1), Loop-through

External synchronized output connector
BNC type (1), Loop-through, with 75 ohms automatic terminal function

Built-in speaker output
0.5 W (mono)

General

Power	AC100 – 240 V, 50/60 Hz
Power consumption	Maximum: approx. 72 W, 0.8 A – 0.4 A
Peak inrush current	(1) Power ON, current probe method: 34A (100V), 64 A (240V) (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 55 A (230V)
Dimensions	Approx. 493 × 408 × 264 mm (not including the projection parts) (19 1/2 × 16 1/8 × 10 1/2 inches) (w/h/d)
Mass	Approx. 9.6 kg (21 lb 3 oz)

Operating conditions

Temperature	0 °C to 35 °C (32 °F to 95 °F)
Recommended temperature	20 °C to 30 °C (68 °F to 86 °F)
Humidity	30% to 85% (no condensation)
Pressure	700 to 1060 hPa

Storage and transport conditions

Temperature	–20 °C to +60 °C (–4 °F to +140 °F)
Humidity	0% to 90%
Pressure	700 hPa to 1060 hPa

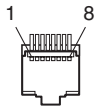
Accessories supplied	AC power cord (1) AC plug holder (1) Operating Instructions (1) CD-ROM (1) Using the CD-ROM Manual (1) Warranty Card (1)
Optional accessories	Mounting bracket MB-529 SDI input adaptor BKM-320D

Design and specifications are subject to change without notice.

Note
Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

Pin assignment

PARALLEL REMOTE connector
Modular connector
(8-pin)



Pin number	Functions
1	Designate LINE A input signal
2	Designate HDMI input signal
3	Designate RGB/COMPONENT input signal
4	16:9
5	GND
6	4:3
7	Selecting UNDER
8	Selecting OVER

For details on function allocations, see "REMOTE PARALLEL menu" (page 19).

Wiring required to use the Remote Control

Connect the function you want to use with a Remote Control to the Ground (Pin 5).

Video signal formats

The unit is applicable to the following signal formats.

System	Total lines	Active lines	Frame rate	Scanning format	Aspect ratio	Signal standard
575/50I (PAL)	625	575	25	2:1 interlace	16:9/4:3	EBU N10 (PAL: ITU-R BT.624)
480/60I (NTSC) *1	525	483	30	2:1 interlace	16:9/4:3	SMPTE-253M (NTSC: SMPTE-170M)
576/50P	625	576	50	Progressive	16:9/4:3	ITU-R BT.1358
480/60P	525	483	60	Progressive	16:9/4:3	SMPTE-293M
1080/24PsF *1	1125	1080	24	Progressive (sF)	16:9	SMPTE-RP211
1080/25PsF	1125	1080	25	Progressive (sF)	16:9	SMPTE-RP211
1080/24P *1	1125	1080	24	Progressive	16:9	SMPTE-274M
1080/25P	1125	1080	25	Progressive	16:9	SMPTE-274M
1080/30P *1	1125	1080	30	Progressive	16:9	SMPTE-274M
1080/50I	1125	1080	25	2:1 interlace	16:9	SMPTE-274M
1080/60I *1	1125	1080	30	2:1 interlace	16:9	SMPTE-274M/BTA S-001B
720/50P	750	720	50	Progressive	16:9	SMPTE-296M
720/60P *1	750	720	60	Progressive	16:9	SMPTE-296M

*1 Also supports frame rate 1/1.001.

Applicable DVI input signals

When a PC signal is input to the HDMI IN connector using a DVI conversion cable

Resolution	Dot clock (MHz)	fH (kHz)	fV (Hz)
720 × 400 70Hz	28.322	31.469	70.087
800 × 600 56Hz	36.000	35.156	56.250
800 × 600 60Hz	40.000	37.879	60.317
1024 × 768 60Hz	65.000	48.363	60.004
1360 × 768 60Hz	85.500	47.712	60.015

Note

The sides of the displayed picture may be invisible depending on the input signal.

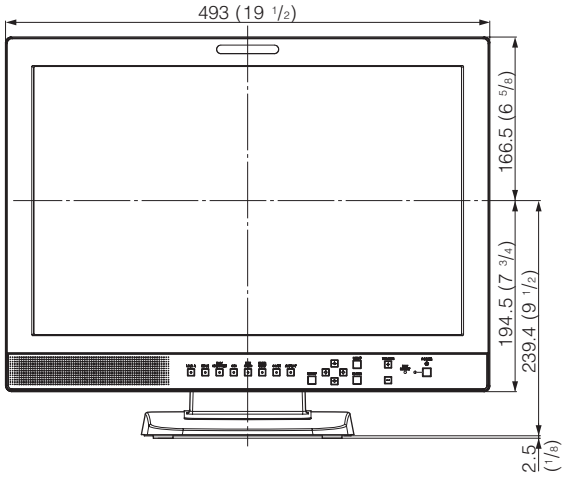
When an optional input adaptor is conneted, the unit is applicable to the following signal formats.

When BKM-320D is connected

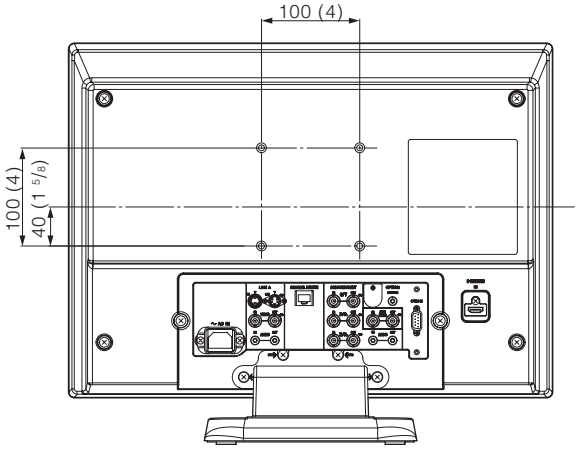
Input		
System	Signal standard	BKM-320D
575/50I	ITU-R BT.656	○
480/60I	SMPTE-259M	○

Dimensions

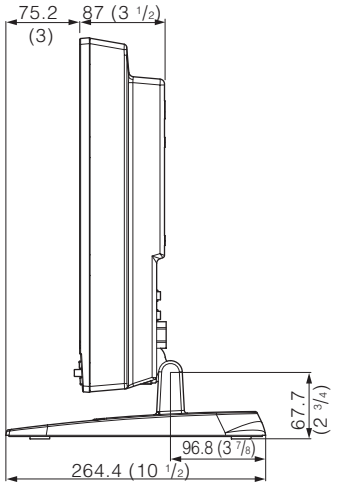
Front



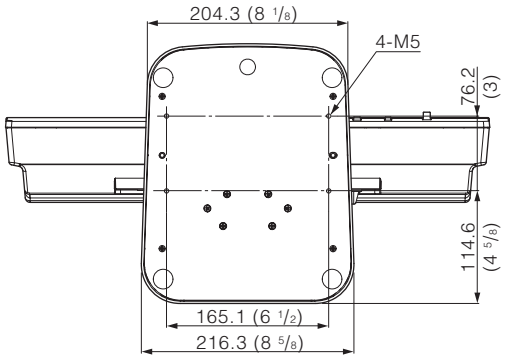
Rear



Side



Bottom



Unit: mm (inches)